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THE INSECT PEST SURVEY
BULLETIN

A periodical review of entomological conditions throughout the United States
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THE MOST IMPORTANT RECORDS FOR APRIL, 1932

Climatic conditions during the month of April were favorable for grasshoppers over the greater part of the heavily infested territory. Reports of the activity of those unimportant species which overwinter as nymphs were quite generally received from the entire Mississippi Valley. Up to the last week in the month no hatching of *Melanoplus* or *Camnula* was reported.

Cutworms of several species were appearing in limited areas over practically the entire country. In the Everglades district of Florida 100 acres of sugarcane were stripped and tobacco was also being damaged in that State and in North Carolina. Alfalfa was being seriously damaged over a large area in East-Central Nebraska by *Euxoa messoria* Harr. Here the cutworm was assuming somewhat armyworm-like habits owing to its enormous numbers.

By the third week in April practically all Hessian flies in the East Central States had pupated; and during the latter half of the month there was some emergence in parts of this area. The extremely cold weather during the middle of March was evidently very disastrous to the pupae in the eastern part of this area, Ohio reporting that the insect was very difficult to find in most parts of the State visited. In Illinois, Missouri, and Nebraska, however, the insect was still present in threatening numbers. In Illinois approximately 90 per cent of the larvae and pupae have survived. Egg laying was well under way in that section throughout the month, young larvae having been observed in Missouri by the 15th.

Scattered and rather light flights of chinch bugs occurred during the first week of the month in Illinois; and present indications are that these insects will be troublesome in central Illinois and Missouri.

Pupation of the codling moth started in the Middle Atlantic, East Central, and West Central States during the third week of April, at which time pupation was about one-third completed in the Pacific Northwest.

During the third week of the month emergence began in Georgia and southern Missouri. In the Southwest emergence was observed during the first week in the month, and moths were abundant in bait pans in New Mexico by the 10th. In southern California eggs were observed during the third week in the month.

Fruit aphids were reported as generally scarce throughout the New England States. A moderate abundance of these insects was reported from the Middle Atlantic States, and but slight abundance in the South Atlantic States. In The East Central States these insects were moderately abundant, and appeared to be decreasing in Illinois and Missouri.

Eggs of the oriental fruit moth were observed in northeastern Georgia on April 18, by which time over 70 per cent of the overwintering larvae had pupated and about a third had emerged as adults. The first emergence in Virginia was observed on April 14 and the first eggs were found in that State on the 22d. By the third week in April pupation was practically completed in Delaware. No pupation had taken place by this time, however, in western New York.

The plum curculio was first collected in the field in Tennessee on April 4, in Georgia on April 5, in Virginia on April 6, and in Delaware on April 20. This is the latest appearance of adults in the past 12 years in Georgia.

The vegetable weevil is spreading gradually in the Gulf section. During late March and early April it was found in 2 counties in the southeastern corner of Arkansas, in 18 additional parishes in Louisiana, and in 1 additional county in Texas.

The Colorado potato beetle was reported in unprecedented numbers from the Gulf coast of Alabama and Mississippi.

Overwintering adults of the Mexican bean beetle seem to have passed the winter exceptionally well as far north as Connecticut, and adults were emerging from hibernation quarters during the third week in April in outdoor cages in Delaware.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

- Wisconsin C. L. Fluke (April 25): Eggs of Cannula nallucida Scudd., are very numerous.
- South Dakota H. C. Severin (April 20): Eggs are very abundant in general over South Dakota; not hatched as yet.
- Nebraska M. H. Swenk (March 20 to April 20): Additional reports of an abundance of grasshopper nymphs in the fields continued to come from northern Nebraska during late March and early April. The green-striped grasshopper (Chortophaga virdifasciata DeG.) continued to be the principal species involved. Melanoplus eggs gathered from the fields of Knox and Boyd Counties on April 7 and 8 and placed under constant warm temperatures started to hatch on April 18.
- Tennessee C. Benton (March): Grasshoppers, mostly nymphs in various instars, were observed daily in wheat fields near Fayetteville even during a cold spell. Adults of the bird grasshopper (Schistocerca americana Drury) were observed in considerable numbers in a wheat field near Howell, Lincoln County, on March 29.
- Missouri L. Haseman (April 25): Eggs of the differential grasshopper, M. differentialis Thos., two-striped grasshopper, M. bivittatus Say, and red-legged grasshopper, M. femur-rubrum DeG. wintered well in western Missouri, but not so well in the central part of the State. Adult of C. virdifasciata was taken on April 23 at Columbia. Adults of S. americana were very common at Columbia April 22, probably migrants.
- Alabama J. M. Robinson (April 20): Grasshoppers are very abundant at Brewton and Georgiana, they are eating seeds off strawberries and causing the berries to shrivel, causing \$300 damage per day.
- Mississippi C. Lyle and assistants (April): With the exception of some injury to strawberry plants by C. virdifasciata, grasshoppers have been attracting but little attention throughout the State during the month. (Abstract, J.A.H.)
- Texas R. R. Renkert (April 4): Conditions in parts of Texas have been favorable to successful overwinter/^{ing} of grasshoppers. Damage may be expected, possibly somewhat heavier than last season. Observations by this institution and by E. V. Walter of the U. S. D. A. indicate that foci are in Presidio, El Paso, Pecos, Uvalde, Medina, Tarrant, and Kaufman Counties.

- Wyoming A. G. Stephens (April 18): Grasshoppers are moderately abundant over the northeastern section of the State.
- Colorado G. M. List (April 20): Grasshoppers are very abundant in parts of eastern Colorado.
- Utah G. F. Knowlton and M. J. Janes (April 19): Eggs have not commenced hatching in northern Utah. An examination of the egg-laying grounds in the foothills west of Trenton showed mortalities varying from 30 to 100 per cent, with a survival of 70 per cent in the most favorable area. Beetle larvae were feeding upon most of the egg masses that were in good condition.
- New Mexico J. R. Eyer (April 20): Nymphs and eggs of M. differentialis are very abundant.

MORMON CRICKET (Anabrus simplex Hald.)

- Montana J. H. Pepper (April 21): Eggs of the Mormon cricket are hatching in very large numbers at Big Horn.

CUTWORMS (Noctuidae)

- North Carolina Z. P. Metcalf (April 22): Cutworms are more abundant in tobacco in the eastern half of the State than they have been for several years.
- Georgia W. H. Clarke (April 20): Cutworms are moderately abundant in Thomaston.
- Florida J. R. Watson (April 23): According to Prof. R. N. Lobbell of the Everglades Experiment Station, cutworms entirely stripped 100 acres of sugarcane in the Everglades and did much damage to other fields.
- F. S. Chamberlin (April 12): Cutworms are quite abundant in newly set tobacco in Gadsden County.
- Arkansas D. Isely (April 23): Cutworms are scarce in Washington County; lowest injury for several years.
- South Dakota H. C. Severin (April 20): Little damage has been reported as yet, but cutworms are fairly abundant.
- Nebraska M. H. Swenk (March 20 to April 20): From April 9 to 20 many farmers in a large area in east-central Nebraska reported that serious damage was being done to alfalfa by the dark-sided cutworm (Euxoa messoria Harr.) working on the crowns of the plants, cutting off the young green shoots as fast as they started. The older alfalfa fields were first affected, the cutworms later moving into newer fields. Alfalfa was the chief crop attacked, but the cutworms were also working freely on sweet clover, and in Platte County were injuring wheat

and rye, while in Hamilton County they moved into barley fields after stripping the alfalfa plants. Lettuce and other garden truck were also destroyed in some places. The area infested, as so far reported, extends across the State from Knox, Antelope, and Pierce Counties on the north to Webster and Thayer Counties in the South. Those cutworms that hatched last fall or very early this spring have already made considerable growth. The recently hatched ones are still very small. These cutworms are active in the day time in some localities where they are especially abundant, and have been reported repeatedly as migrating in large numbers from field to field, sometimes across roads, but not in the large solid masses of worms, as in the true armyworm. According to our previous notes on this species, these cutworms will not stop feeding and enter the soil for pupating until well into May, and it will probably be the end of June or in July before all have done this. This means a long period for the cutworms to work on the corn; and if parasites do not destroy this abundance of cutworms within the next few weeks, there will be considerable danger to the corn from this outbreak.

Missouri

L. Haseman (April 25): April 24 moths of greasy cutworms, Agrotis ypsilon Rott., on wing. Cutworms abundant at Columbia.

Kansas

H. R. Bryson (April 22): Cutworms are moderately abundant on alfalfa, garden crops, and strawberries. Reports of damage have been received from scattered localities in central Kansas.

Mississippi

C. Lyle and assistants (April): The usual reports of cutworm damage, particularly to garden truck, were received during the month. (Abstract, J.A.H.)

Oklahoma

C. F. Stiles (April 21): Cutworms are being reported in fairly large numbers from practically all parts of the State. Some alfalfa fields are infested with the variegated cutworm (Lycophotia margaritosa saucia Hbn.) and the pale western cutworm (Porosagrotis orthogonia Morr.) in Texas County.

Montana

J. H. Pepper (April 21): The army cutworm (Chorizagrotis auxiliaris Grote) has been recorded in outbreak numbers. The damage is not general, but has been recorded in scattered fields throughout Missoula, Fergus, Yellowstone, and Powder River Counties.

Utah

G. F. Knowlton (April 24): Cutworms are reported seriously retarding the growth of alfalfa in parts of Millard County.

Nevada

G. G. Schweis (April 20): Cutworms are very abundant and doing considerable damage to alfalfa at Fallon and Reno.

New Mexico

J. R. Eyer (April 20): L. margaritosa saucia is very abundant all over the State.

ARMYWORM (Cirphis unipuncta Haw.)

New Mexico

J. R. Eyer (April 20): This insect is very abundant all over the State.

SALT-MARSH CATERPILLAR (Estigmene acraea Drury)

Florida

J. R. Watson (April 22): This insect has been very abundant on a large variety of weeds; and F. W. Walker reports that it has destroyed, or badly damaged, a great many fields of watermelons and corn in northern Florida, all the way from Gainesville to Monticello and as far west as Crawfordville in Waukulla County. I never saw this pest so abundant before. It has undoubtedly done damage to the extent of many thousands of dollars.

WHITE GRUBS (Phyllophaga spp.)

Georgia

J. B. Gill (April 25): Reports of damage by May beetles to pecan buds and foliage are being received from scattered localities throughout the State.

Mississippi

C. Lyle and assistants (April): May beetles started to appear by the middle of the month and were reported from several sections damaging the foliage of pecans. (Abstract, J.A.H.)

Wisconsin

C. L. Fluke (April 25): Beetles of brood A of white grubs are moderately abundant in central and northern Wisconsin.

WIREWORMS (Elateridae)

Alabama

K. L. Cockerham (April 6): On April 5, adult click beetles (Heteroderes laurentii Guer.) were taken from field hibernating cages at Foley and it was found that about one-third have successfully passed the winter as adults. This is the highest percentage to come through the winter in hibernation cages that we have yet found during several years' investigation. A very interesting thing with this species was that on April 5 and 6, when larvae were removed from hibernating cages, 13 per cent were found to have already pupated. At the same time, diggings and soil siftings showed the presence of pupae in the fields. This is about three weeks to one month earlier than the first pupation of previous springs.

Mississippi

K. L. Cockerham (April 12): On April 12 the first newly emerged adult of H. laurentii was found in the field at Biloxi and on this date the first adult emerged in the laboratory. This emergence is three weeks to a month earlier than usual. On the same date larvae were found attacking young corn very freely.

Utah

G. F. Knowlton (April 18): Wireworms are reported in northern Utah.

California

F. H. Wymore (March 29): Wireworms are moderately abundant at Chico and are seriously damaging potatoes.

A. E. Michelbacher (April 19): Wireworms (Anchastus cinereipennis Esch.) are doing some damage near Rio Vista. In some sugar-beet fields they have reduced the crop about 5 per cent. The larvae are quite numerous, but are not doing so much damage this year as last. In a portion of one field 300 larvae were gathered in 57 minutes on the 25th of March. The larvae were easily spotted by examining the soil around the wilted young seedling beets.

RED SPIDER (Tetranychus telarius L.)

North Carolina

W. A. Thomas (April 11): Red spiders are doing considerable damage to strawberries in the Chadbourn area. They are causing some of the bearing plants to die and seriously weakening others.

Mississippi

C. Lyle and assistants (April): Rather heavy infestations of red spiders on evergreens and other ornamentals have been reported from a number of places in the State. These infestations seem to be associated with continued dry weather. (Abstract, J.A.H.)

Washington

E. J. Newcomer (March 30): Hibernating mites are numerous in orchards at Yakima that were badly infested last year. Of 1,140 mites found under bark just below the ground, 475, or 42 per cent, were dead. Only about 2 per cent of the mites hibernating in codling moth bands above the snow line survived.

CEREAL AND FORAGE - CROP INSECTS

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

Ohio

T. H. Parks (April 27): An examination of puparia taken April 11 from an early-sown wheat field in Pickaway County showed heavy parasitism. A very few eggs were present then. An examination of wheat plants taken April 23 from the same field showed very few eggs present and no flaxseeds were located. An examination of a Franklin County field on April 25 showed no eggs present. This field was sown early last fall and 42 per cent of the plants were infested in November. Hessian fly is apparently not making any headway in central Ohio and eggs are difficult to find.

- Indiana C. M. Packard (March): Considerable pupation took place in early and late March at Lafayette. High mortality of the early March pupae occurred owing to cold weather March 7-24. No emergence of adults.
- Illinois J. H. Bigger (April): Examinations on April 19 indicated 90 per cent survival in west-central Illinois. Approximately 75-80 per cent pupation has occurred at this time. Some emergence has taken place. Eggs are moderately abundant.
- Tennessee C. Benton (March): Pupation increased gradually at Fayetteville until by March 26 about half the puparia contained pupae. There was slight emergence of adults and oviposition on March 1-5 and 24-30. First small larvae were found March 20. A few half-grown larvae were present March 25-30.
- Missouri L. Haseman (April 25): The Hessian fly situation is serious. Adults were observed ovipositing in Sedalia April 16. Some young larvae observed in leaf sheaths at Columbia. Practically all flaxseeds contained pupae April 1.
- Nebraska M. H. Swenk (March 20 to April 20): During the period here covered additional instances of heavy infestation of winter wheat fields came to our attention, all of them, however, within the area of infestation outlined in my report for the last issue of the Insect Pest Survey Bulletin.

CHINCH BUG (Blissus leucopterus Say)

- Illinois W. P. Flint (April): There have been scattered and rather light flights of chinch bugs on several of the warm days this spring, although there are still many bugs in hibernation. A light flight occurred on April 2, which was probably the first one this year.
- J. H. Bigger (March 26): All central counties expect severe damage from chinch bugs in 1932. Some damage is likely to occur in all counties from a line extending from Rock Island to Kankakee on the north to Murphysboro and Carbondale on the south. (April): The chinch bug is very abundant. A flight occurred April 4.
- Missouri L. Haseman (April 25): The chinch bug situation is threatening in central Missouri. Bugs were leaving winter quarters April 15.
- Kansas H. R. Bryson (April 22): Chinch bugs are scarce at Manhattan.

A GRAIN MITE (Eriophyes tenuis Nal.)

South Dakota H. C. Severin (March 14): This mite (E. tenuis) entirely destroyed some small grain in the agronomy greenhouse at Brookings. Grains were grown for crossing purposes. It is a common mite in Europe, where it works on grains.

CORN

CORN EAR WORM (Heliothis obsoleta Fab.)

Florida H. T. Fernald (April 5): Some cornfields in Brevard County have been almost ruined by boring of the corn ear worm in the stems from a foot to a foot and a half high. About 90 per cent of the corn was ruined in one field. Caterpillars are about full-grown now.

ALFALFA

ALFALFA WEEVIL (Hypera postica Gyll.)

Utah G. F. Knowlton (April 18): A few weevils are out in northern Utah.

Nevada G. G. Schweis (April 20): Alfalfa weevils are moderately abundant at Reno. The number of eggs deposited is greater than last year.

CLOVER LEAF WEEVIL (Hypera punctata Fab.)

Kansas H. R. Bryson (April 22): The clover leaf weevil was reported injuring alfalfa at Iola March 26. Dr. E. G. Kelly reported larvae plentiful in alfalfa at Kingman March 31.

Iowa H. E. Jaques (April 26): The clover leaf weevil is very abundant in Henry County.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis Fab.)

Louisiana W. E. Hinds (April 27): The first generation was retarded in its development by the very unusual freezes of March 9-15. Hibernating stages of larvae and pupae were not killed; and emergence of moths and first generation reproduction was again well under way by the last of March. Eggs had been found more abundant at Baton Rouge by the middle of April than they were at the beginning of the second generation in 1931.

CHAFER BEETLES (Scarabaeidae)

Louisiana W. E. Hinds (April 27): Euethiola rugiceps Lec., Ligyrus gibbosus DeG., and Dyscinetus trachynyxus Burm. are very abundant in many localities. Populations of from 2,000 to 5,000 adults were found during March and April in some fields; and injuries to stands of planted and stubble cane and to early-planted corn are serious. L. gibbosus began laying eggs about April 10 to 15.

FRUIT INSECTS

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

- Delaware L. A. Stearns (April 21): The first pupation of overwintered larvae was on April 21.
- Georgia C. H. Alden (April 18): The codling moth was reported at Cornelia. 125 moths were caught in 15 bait traps on April 19. No egg deposition has been observed to date.
- Ohio T. H. Parks (April 27): Codling moth is moderately abundant in most orchards with a few orchards having very heavy infestations. Collections of overwintering larvae showed that less than 2 per cent of the worms had pupated April 15. Packing houses contain fewer larvae than last spring.
- Indiana J. J. Davis (April 26): The codling moth has wintered over in rather large numbers; and we can anticipate an abundance of apple worms this season. At Bedford 3 per cent had pupated April 23 while 9 per cent had pupated at Lafayette.
- Missouri L. Haseman (April 25): The first codling moths were seen in southeastern Missouri April 19. About 20 per cent of the larvae pupated at Columbia April 19; about 10 per cent pupated at Aurora in southwest Missouri April 20. The situation is threatening.
- Nebraska D. B. Thelan (March 20 to April 20): Overwintered larvae first pupated on April 18.
- Utah G. F. Knowlton (April 18): Codling moth survival is rather low in the Logan area, as indicated by counts made up to date. It is still in cocoons in northern Utah.
- New Mexico J. R. Eyer (April 20): Adults commenced emerging April 1 at State College. It was abundant at bait pans the week of April 10.
- Washington E. J. Newcomer (March 30): Examination of 5,692 larvae collected during March from burlap bands that were above the snow line during the winter showed only 39 dead, or 0.7 per cent. Minimum temperature during the winter was -30° F., and there were practically no large fluctuations in temperature. Pupation was just beginning March 25. Since infestation was greater last fall than it has ever been, there will be a big infestation this year unless unfavorable weather during May and June prevents normal oviposition. (April 22): Of 500 larvae examined, 23 per cent had pupated.

California A. E. Michelbacher (April 19): While no codling moths have been observed, they have been emerging for some time in the area around Clarksburg.

R. Bogue (April 22): The eggs of the codling moth are being found in Orange and Los Angeles Counties and are very early this year, and considerably earlier than last year.

EASTERN TENT CATERPILLAR (Malacosoma americana Fab.)

New York N. Y. State Coll. Agr., Weekly News Letter (April 25): Tent caterpillars began hatching on April 20 in Ulster County.

Pennsylvania J. N. Knull (April 22): The first eggs hatched on April 22 in Horse Valley, Franklin County.

Delaware L. A. Stearns (April 21): The first hatching at Newark was observed April 18.

Virginia W. J. Schoene (April 23): Caterpillars were first observed hatching on April 4. This pest was very numerous in the central part of the State last year.

Georgia W. F. Turner (April 9): Numerous tents were observed in Upson and Meriwether Counties on April 6. These were mostly in wild cherry and would average about 6 inches across.

Mississippi C. Lyle (April 22): Colonies were observed in crabapple trees at Ellisville, Jones County, on April 4. These insects were reported as defoliating wild cherry trees near Leaf, Green County, a few days later.

EYE-SPOTTED BUDMOTH (Spilonota ocellana Schiff.)

New York N. Y. State Coll. Agr., Weekly News Letter (April 25): Larvae were observed April 21 in Dutchess County, and April 22 in Ulster County.

A CASE BEARER (Coleophora sp.)

New York N. Y. State Coll. Agr., Weekly News Letter (April 25): Case bearers began to be active April 21 in Ulster County.

FRUIT TREE LEAF ROLLER (Cacoecia argyrospila Walk.)

Colorado G. M. List (April 20): Fruit-tree leaf rollers are from scarce to moderately abundant in Delta and Montezuma Counties.

APHIDS (Aphididae)

Vermont H. L. Bailey (April): Fruit aphids are scarce in Montpelier.

- Massachusetts A. I. Bourne (April 25): Apple plant lice were hatching on April 17 and out in numbers by the 20th. At that time most of the fruit buds were in the silver stage, only the most advanced showing any evidence of color.
- Connecticut M. P. Zappe (April 22): Aphis pomi DeG. has hatched but is very scarce and hard to find.
- New York C. R. Crosby (April 25): Fruit aphids are just beginning to hatch.
- N. Y. State Coll. Agr., Weekly News Letter (April): By the middle of the month apple aphids were becoming numerous in the eastern part of the State. Though less abundant than the apple grain aphid (Rhopalosiphum prunifoliae Fitch) the rosy apple aphid (Anuraphis roseus Baker) was being reported during the first half of the month in the eastern half of the State and was increasing rapidly by the middle of the month in both the eastern and western fruit areas. The apple grain aphid was observed in the lower Hudson River Valley during the first week in April. By the second week in the month hatching was quite general throughout the entire Hudson River Valley and by the third week in the month, it was being quite generally reported throughout the western part of the State. (Abstract, J.A.H.)
- Pennsylvania J. R. Stear (April 21): Apple aphids have been hatching since April 5. Many were killed by the cold weather during April.
- T. L. Guyton (April 21): The grain and the rosy aphids are moderately abundant.
- Delaware L. A. Stearns (April 21): Fruit aphids are moderately abundant throughout the State.
- Virginia W. J. Schoene (April 23): Rosy aphid eggs were observed hatching in Augusta County on April 4. They seem to be present in very small numbers. They were reported present in the northern part of the State around April 15, but are not sufficiently numerous to be injurious. The present indications are that no injury will result from apple aphids this season.
- Ohio T. H. Parks (April 27): The apple grain aphid, R. prunifoliae, is moderately abundant.
- Indiana J. J. Davis (April 25): Apple aphids were very abundant when the trees were in the green bud stage but they have been gradually decreasing in numbers and at present are very scarce.
- Illinois W. P. Flint (April): Aphids were quite abundant on apple buds at the time of the tip-green stage. The species found were practically all grain aphids. The numbers of aphids have been decreasing steadily during the past few weeks.

Michigan E. I. McDaniel (April 25): A. pomi is abundant on apple buds at Pennville.

Wisconsin C. L. Fluke (April 25): Oat aphids are very abundant; hatched extremely numerous.

Missouri L. Haseman (April 25): Various species, including the apple grain aphid and the woolly aphid (Eriosoma lanigerum Hausm.), have been attracting some attention but are not so abundant as usual. Thus far the rosy apple aphid has attracted no attention in Missouri.

Nevada G. G. Schweis (April 20): Fruit aphids are moderately abundant at Reno. Damage to plum and peach.

Utah G. F. Knowlton (April 18): Fruit aphids are hatching in northern Utah.

California E. O. Essig (April 23): The apple grain aphid is very abundant on oats in the San Francisco Bay district.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Massachusetts A. I. Bourne (April 25): We have had some reports of the appearance of the San Jose scale in occasional orchards over the State. The scale has apparently built up gradually in those orchards which have been favored by freedom from European red mite infestation, and consequently the growers in those orchards neglected to make any dormant applications.

New York N. Y. State Coll. of Agr., Weekly News Letter (April): The San Jose scale is so plentiful in Ulster County that most growers are applying special treatments for its control. It was also reported as very abundant in Orange, Erie, Ontario, and Yates Counties. (Abstract, J. A. H.)

C. R. Crosby (April 25): The San Jose scale is much more abundant than in several years.

P. J. Parrott (April): The San Jose scale is very abundant in western New York.

Pennsylvania T. L. Guyton (April 21): The San Jose scale is very abundant. About 10 per cent living scale on trees in Franklin County in unsprayed orchards.

J. R. Stear (April 21): The San Jose scale has had a heavy mortality in at least one apple orchard in Ligonier. Counts of 3,863 scales made February 11 showed 42 per cent dead. Of 531 scales examined April 8, 88 per cent were dead. This is probably due to sub-zero weather for a few days in March.

- Delaware L. A. Stearns (April 21): The San Jose Scale is more abundant than it has been for some years.
- Georgia O. I. Snapp (April 20): Infestation on peach trees at Fort Valley is heavier than it has been for many years.
- C. H. Alden (April 18): The San Jose scale is moderately abundant at Cornelia.
- Florida J. R. Watson (April 23): The San Jose scale is moderately abundant.
- Indiana J. J. Davis (April 26): San Jose scale wintered with little mortality. Very likely there will be a serious infestation in some orchards.
- Wisconsin E. L. Chambers (March 30): The San Jose scale is still restricted to a number of southern Wisconsin counties, and it has been discovered in two large villages near large nurseries and an active spray campaign is in progress at each of these places involving the spraying of all infested trees and shrubs on more than 600 properties under State supervision.
- Missouri L. Haseman (April 25): The situation is serious in the southern part of the State although dormant spray is generally being used this year. The scale is less serious in the northern part of the State. There was a 43 per cent winter mortality at Columbia.
- Alabama J. M. Robinson (April 20): The San Jose scale is moderately abundant at Auburn.
- Washington E. J. Newcomer (March 30): Examination of 2300 hibernating scales in March showed 615, or 26.8 per cent, dead.
- Idaho C. Wakeland (April 19): The San Jose scale is very abundant at Lewiston. Out of 10,000 scales examined 37 per cent are alive.

LEAFHOPPERS (Cicadellidae)

- Connecticut P. Gorman (April 22): Eggs of Typhlocyba pomaria McA. are abundant on twigs in many orchards in New Haven County.
- Pennsylvania S. W. Frost (April 25): Leafhoppers are especially abundant this spring in Adams County. The species that are most evident are Erythroneura obliqua Say, E. dorsalis Gill., and E. hartii Gill. The combined work of these three is causing a great deal of injury to apple foliage.

TARNISHED PLANT BUG (Lygus pratensis L.)

- New York N. Y. State Coll. Agr., Weekly News Letter (April 25): Tarnished plant bugs observed April 18 in Dutchess County.
- Indiana J. J. Davis (April 26): Apple leafhoppers were abundant early in April, but have not shown the increase anticipated.
- Illinois J. H. Bigger (April 8): The tarnished plant bug has been seen feeding on apple buds in Pike County.
- Missouri L. Haseman (April 25): Overwintering adults of different species were observed moving to apple foliage April 19.
- Utah G. F. Knowlton (March 25): Tarnished plant bugs are now active on warm days. A number of adults have been taken under the rough bark of apple trees, during examination of overwintering codling moth larvae. (April 13): Adults are abundant upon wheat at Collinston at the present time. No nymphs have been observed up to this time.
- Washington E. J. Newcomer (March 30): Of 700 bugs hibernating under leaves in an outdoor cage, only 26, or 3.7 per cent, survived. These were covered with snow most of the winter and the temperature under the snow did not get below 32° F. A year ago the survival under similar conditions was 12.5 per cent. Bugs have been plentiful in cover crops during March, but little damage to fruit buds has occurred.

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

- Mississippi J. Milton (April 20): The shot-hole borer was found to be infesting apple trees near Corinth in the early part of April. These trees had been weakened by the presence of the San Jose scale.

APPLE FLEA WEEVIL (Orchestes pallicornis Say)

- Ohio T. H. Parks (April 27): The apple flea weevil is very abundant and doing serious injury in an orchard in Jackson County. This county has not suffered from this insect in previous years.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

- Maine C. R. Phipps (April 25): European red mite eggs were reported in abundance in certain Oxford County orchards.
- Massachusetts A. I. Bourne (April 25): From all appearances from orchards over the State, the European red mite seems to be as abundant as ever.
- Connecticut M. P. Zappe (April 22): Some orchards have as many as usual, while in other orchards eggs are very scarce. The general average is probably less than in other years.

PEACH

CLIMBING CUTWORM (Lampra barnesi Benjamin)

Washington E. J. Newcomer (April): The climbing cutworm was first noted climbing peach trees and injuring fruit buds on April 10 in Yakima. On April 22 many larvae are pupating.

LESSER PEACH BORER (Aegeria pictipes G. & R.)

Georgia O. I. Snapp (April 16): Eggs under field conditions are now hatching at Fort Valley. Some larvae in trees are now one week old. Infestation is heavy in old neglected peach orchards.

W. H. Clarke (April 4): Field collections at Thomaston showed a number of pupae March 29. An adult male emerged from field collections placed in the insectary April 4, the first adult to emerge in the insectary.

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Delaware L. A. Stearns (April 21): Eighty per cent pupation of overwintering larvae by April 10. Ninety-one per cent pupation of overwintering larvae by April 21.

Virginia W. J. Schoene (April 23): Adults began emerging at Blacksburg on April 14, and the first eggs were obtained April 22. Moths were obtained in bait pails at Bonsack on April 14.

Georgia W. H. Clarke (April 18): The first eggs were laid in the insectary at Thomaston. April 14. Over 70 per cent of the overwintering material had pupated through today April 18 and over 35 per cent of the overwintering material had emerged as adults through today. No eggs have been found in field observations.

C. H. Alden (April 18): A few moths are being caught in bait traps; no egg deposition.

O. I. Snapp (April 20): No first-generation larvae have been found in Fort Valley in the field to date.

Indiana J. J. Davis (April 26): The oriental fruit worm apparently hibernated with a very low mortality; and we may anticipate a noticeable increase this spring. However, the peach crop will be very light, but probably there will be enough fruit to carry over the insect in large numbers. No moths had emerged at Bedford by April 23.

Wisconsin C. L. Fluke (April 25): The oriental fruit moth is very abundant; more live worms overwintered than usual.

Tennessee

H. G. Butler (April 12): A single oriental fruit moth, the first, emerged from the insectary stock at Harriman today.

Bureau of Entomology News Letter, No. 214 (February): It was found that an average of 1 larva could be found on each peach mummy. This winter similar examinations have been made * * * and it has been found that larvae are practically absent from peach mummies. It is thought that possibly the long-continued warm weather last fall permitted the immature larvae to complete their feeding and move to better hibernation quarters.

PEACH TWIG BORER (Anarsia lineatella Zell.)

California

F. H. Wymore (March 29): The peach twig borer is beginning to feed on the new shoots of peach, almond, etc., in the Sacramento Valley.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Delaware

L. A. Stearns (April 21): The first curculio emerged from hibernation on April 20.

Virginia

W. J. Schoene (April 23): Two adults were taken on April 6 near Greenwood, but subsequent jarring in that section and in Augusta County failed to show the presence of the plum curculio during the next ten days. Adults were taken in the Roanoke district on April 21; and were found in Blacksburg on April 23.

Georgia

O. I. Snapp (April 5): The first adult of the season was captured today after jarring many peach trees adjoining Woodlands at Fort Valley. Less than 5 per cent of the buds have opened on the first-blooming variety of peach. The other varieties are still dormant. The curculios begin to appear from hibernation when the first buds open. They are very late leaving hibernation this year. Likewise the peach trees are blooming much later than usual. This is the latest appearance of adults from hibernation in 12 years of records, and ordinarily we would predict only one generation; however, since the peach trees are correspondingly late blooming this year, we have no certain basis for a prediction as to the number of broods of larvae to expect. (April 7): Adults are beginning to leave hibernation in numbers. As many as 10 were captured from a single tree in the first row of a peach orchard adjoining woodland. They have not yet passed the second row of those orchards which are partly in bloom. Some orchards are still dormant and in these the adults have not yet appeared. (April 20): The appearance of adults from hibernation has been light to date, and indications point to a light source of infestation for the 1932 season. Although some varieties of peaches are in full bloom and the weather sufficiently warm to cause emergence from hibernation, very

few adults have been captured in most of the orchards. A light source of infestation has been anticipated on account of the light infestation in 1931 and the probability of mortality from weather conditions during the hibernation season. (April 25): A larva about three days old was found in a small green peach today. A number of eggs were also found in little peaches. Evidently some oviposition has taken place during the last 10 days or 2 weeks.

C. H. Alden (April 18): The plum curculio is scarce at Cornelia. First adults were caught on jarring frames April 9.

J. H. Clarke (April 18): The first curculios of the season were caught by jarring this morning April 4; two specimens were submitted by a Thomaston grower who estimated that 200 trees were jarred. Experimental jarring this morning, April 5, showed only 6 curculios caught in three hours of jarring. The first spring emergence of overwintering curculios is 19 days later than in 1930 and 11 days later than in 1931. Jarring records show a steady increase in numbers of beetles emerging. Feeding injury has been found in the orchards, but no eggs have been found. Mating has been observed in insectary cages every day since April 8.

Tennessee

H. G. Butler (April 4): The first plum curculios to emerge from hibernation at Harriman were taken today, April 4.

Missouri

L. Haseman (April 25): Adults of the plum curculio were taken on apple tree trunks April 23 at Columbia. Early plums are not yet in shuck-split stage, April 25.

APCURCULIO (Conotrachelus anaglypticus Say)

Georgia

O. I. Snapp (April 25): The first adult of the season was taken from a peach tree today at Fort Valley. This species will breed in peach fruit.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

Delaware

L. A. Stearns (April 21): Jarred from peach trees at Bridgeville and Camden April 19.

Georgia

W. H. Clarke (April 18): Large numbers have been caught in jarring peach trees for curculio at Thomaston. Feeding injury has been noticed on blossoms and leaves, and feeding has been observed. Varieties that did not have a full crop of peaches have suffered a decrease in fruits through injury done by this insect. (April 20): Hundreds of spotted cucumber beetles were caught in jarring peaches in middle Georgia.

FULLER'S ROSE BEETLE (Asynonyehus godmani Crotch)

Georgia

W. H. Clarke (April 18): The number of these beetles caught in jarring peach trees at Thoraston has rapidly decreased since the freezing weather of the middle of March. Only two were caught on the 16th.

SNOWY TREE CRICKET (Oecanthus niveus DeG.)

Georgia

W. H. Clarke (April 18): Peach twigs collected from replants and 2-year-old trees on March 11 at Thoraston showed a few eggs imbedded in the pith.

BLACK PEACH APHID (Anuraphis persicae-niger Smith)

New Jersey

T. J. Headlee (April 4): The only striking thing has been the presence of the black peach aphid on peach trees throughout the latter part of winter.

THRIPS (Frankliniella spp.)

California

S. Lockwood (April 20): From examinations made and reports reaching this office, it would seem that Frankliniella spp. have been responsible for more than normal damage to peaches and nectarines in both the San Joaquin and Sacramento Valleys.

PEAR

PEAR PSYLLA (Psyllia pyricola Foerst.)

Massachusetts

A. I. Bourne (April 25): We noted the first case of pear psylla in the college orchard here on April 20. The cold, windy weather was causing the adult psyllas to be very inactive on the trees.

New York

N. Y. State Coll. of Agr., Weekly News Letter (April): Psyllas were emerging in fair numbers on the first of the month in the extreme southern part of the State and egg laying was observed as early as April 2 in Dutchess County. Up to the third week in the month but little egg laying had taken place although adult flies were quite numerous at that time. (Abstract, J.A.H.)

PEAR THRIPS (Taeniothrips inconsequens Uzel)

New York N. Y. State Coll. of Agr., Weekly News Letter (April): During the third week in April pear thrips began to appear in the lower Hudson River Valley. No swarming, however, has been noted up to April 25. (Abstract, J.A.H.)

California S. Lockwood (April 20): The pear thrips has been decidedly more numerous this spring than last year in the Sacramento Delta and in the Napa Valley of Solano County.

CALIFORNIA PEAR SAWFLY (Diphadnus californicus Marlatt)

California F. H. Wymore (March 29): The California pear sawfly is rather abundant in several pear orchards in the vicinity of Vacaville and Davis.

CHERRY

BLACK CHERRY APHID (Myzus cerasi Fab.)

New York N. Y. State Coll. of Agr., Weekly News Letter (April): Black cherry aphids began hatching during the second week in April in the lower Hudson River Valley, and during the third week in central New York. This insect seems to be unusually abundant this year.

CHERRY FRUIT SAWFLY (Hoplocampa cooki Clarke)

California F. H. Wymore (March 29): The cherry fruit sawfly has done considerable damage to the very small "Beauty" plums in an orchard near Vacaville.

RASPBERRY

ROSE SCALE (Aulacaspis rosae Bouche)

Indiana J. J. Davis (April 26): The rose scale was reported as abundant on raspberry at Terre Haute in January. Also on rose at Lafayette.

Mississippi F. A. Smith (April 20): The rose scale has been reported on raspberries in Tate County.

GRAPE

GRAPE LEAFHOPPER (Erythroneura ceras Say)

New York N. Y. State Coll. of Agr., Weekly News Letter (April 25): Grape leafhoppers are flying in Chautauqua County.

Utah G. F. Knowlton (April 13): Grape leafhoppers are emerging from hibernation, and are already abundant around Virginia creeper vines in some parts of Logan.

California S. Lockwood (April 20): In the sandier regions of the San-Joaquin Valley the grape leafhopper is at present as numerous as last year, though the area of extreme infestation may be somewhat smaller. The damage resulting from this insect may, however, be considerably less because of the growers knowing far better how to control this pest. The presence of Anagrus epos Girault, an egg parasite of the grape leafhopper, in great numbers last fall reduced the population considerably.

APPLE TWIG BORER (Amphicerus bicaudatus Say)

Georgia S. Marcovitch (March 28): Sent in from northern Georgia by H. L. Fackler with the remark that they were doing heavy damage to young transparent apple trees at Chatsworth by boring in just above the buds.

Arkansas W. J. Baerg (April 11): A heavy infestation on grape over a small area at Fayetteville was observed on April 5.

New Mexico J. R. Iyer (April 20): The apple twig borer is moderately abundant on grape, pecan, and cherry.

AN AMBROSIA BEETLE (Xyleborus germanus Blandf.)

New York E. P. Felt (April 22): An ambrosia beetle, X. germanus, was found breeding abundantly in greenhouse grape stems at Westbury, L. I. The species is Far Eastern, having been recorded only from Japan, Korea, and Formosa, and previously known to attack Benzoin thunbergii, Carpinus laxiflora, and Styrax japonicum.

CURRENT

IMPORTED CURRENT WORM (Pteronus ribesii Scop.)

Iowa H. E. Jaques (April 26): The imported current sawfly is very abundant in Henry County.

Nebraska D. B. Whelan (March 20 to April 20): The first eggs were found on April 18, four days earlier than in 1931.

CURRENT APHID (Myzus ribis L.)

New York N. Y. State Coll. of Agr., Weekly News Letter (April 25): Current aphids began hatching April 22.

ALMOND

WESTERN TENT CATERPILLAR (Malacosoma pluvialis Dyar)

California

A. E. Michelbacher (April 19): Around Antioch the Western tent caterpillar does not seem to be as destructive as it was a year ago. Some can be found throughout the area on almonds, but no excessive damage is being done.

CLOVER MITE (Bryobia praetiosa Koch)

California

F. H. Wymore (April 11): The brown or almond mite has been reported as doing considerable feeding on prunefoliage about Winters and Davis. Many adults have been present in the orchards for the past two weeks while to date only about three-fourths of the overwintering eggs have hatched, thus indicating that many adult mites have emerged from hibernation.

PECAN

HICKORY SHUCK WORM (Laspeyresia caryana Fitch)

Georgia

J. B. Gill (April 25): From breeding cages on material collected in the winter and kept out of doors, adults of the pecan shuck worm have been emerging in numbers since the middle of April.

PECAN CIGAR CASE BEARER (Collocophora caryae-foliella Clem.)

Georgia

J. B. Gill (April 25): The overwintering larvae of the pecan cigar case bearer are now moving out on the expanding foliage of pecan trees. The infestation is quite light in the pecan orchards of southern Georgia.

PECAN LEAF CASE BEARER (Acrobasis palliolella Rag.)

Georgia

J. B. Gill (April 25): With the bursting of buds on pecan trees, the larvae of the pecan leaf case-bearer have been leaving their hibernacula to gnaw into the buds and upon the expanding leaves.

PECAN BUDMOTH (Gretchena bolliana Sling.)

Georgia

J. B. Gill (April 25): Occasional adults of the pecan bud-moth are encountered in the pecan orchards of southern Georgia.

CITRUS

GREEN CITRUS APHID (Aphis spiraecola Patch)

Florida

J. R. Watson (April 22): There is a very heavy infestation over most of the citrus belt at the present time, a month later than we ordinarily expect such an outbreak. This is undoubtedly the result of a delayed flush of growth and bloom on citrus. The first part of the winter was extremely dry and prevented the trees from blooming to any large extent or putting out much tender growth to serve as food. The drought was broken about the middle of March and the trees are now in full bloom and full of aphids.

ORANGE THRIPS (Scirtothrips citri Moul.)

Arizona

C. D. Lebert (April): Very numerous on the citrus in the Salt River and Yuma Valleys during April. The second and third applications of sulphur were being applied in many of the groves. The flower thrips, Frankliniella tritici Fitch, were more abundant in the bloom by far, although it was not uncommon to find an average of five citrus thrips per blossom in the older groves.

California

E. A. McGregor (April 19): Although the citrus thrips appeared March 6, this year, six days later than normal, it has developed very rapidly. It has suffered a minimum of mortality, and a high percentage of overwintering eggs hatched and developed to maturity. This led to a relatively great amount of injury to vernal foliage of citrus varieties. The outlook is for a year of severe damage to unprotected orchards.

CITRUS WHITEFLY (Dialeurodes citri Riley & How.)

Florida

J. R. Watson (April 23): The citrus whitefly is moderately abundant.

H. E. Fernald (April 20): Far less abundant on citrus trees at Orlando than last year at this time.

Mississippi

C. Lyle and assistants (April): The citrus whitefly is very abundant in many localities throughout the State, attacking citrus, cape jasmine, and privet. (Abstract, J.A.H.)

California

Monthly News Letter, Los Angeles County Agricultural Commissioner (March 29): The first major step in securing the eradication of infestations of the citrus whitefly, found recently in Arcadia, has been taken. Considered a major pest of citrus, to which it causes damage similar to that of the black scale (Saissetia oleae Bern.) the citrus whitefly before being found at Arcadia was known to exist in California only in the vicinity of Sacramento, and since September, 1931, in Santa Ana, Orange County. At both of these places

intensive eradication measures are being carried on. The source of the newly found infestations at Arcadia has been placed as plants sold several years ago from a nursery in which infestation was found and eradicated in 1928.

A CITRUS RED SPIDER (Tetranychus sp.)

California. Monthly News Letter, Los Angeles County Agricultural Commissioner (March 29): Despite unfavorable weather conditions during the winter for insect growth, citrus red spiders have come through in sufficient numbers to cause rather severe infestations in many groves in Los Angeles County much earlier in the season than normally.

CALIFORNIA RED SCALE (Chrysomphalus aurantii Mask.)

Arizona. C. D. Lebert (April): The infestation of California red scale found in a small planting at Yuma in March, 1932, has been controlled. All citrus trees in the bloc were cut back, completely defoliated, brushed, and sprayed. At the present writing there is no known infestation existing within the State of Arizona.

TRUCK - CROP INSECTS

VEGETABLE WEEVIL (Listroderes obliquus Gyll.)

- Alabama J. M. Robinson (April 20): The vegetable weevils have been doing damage since middle of March at Auburn. Adults abundant but no larvae at this time.
- Mississippi C. Lyle and assistants (April): This insect continued to be troublesome throughout the month over the greater part of the State. (Abstract, J.A.H.)
- Arkansas M. M. High (April 6): During the past three weeks this weevil has been found in Ashely and Chicot Counties.
- Louisiana M. M. High (April 6): During the past three weeks this weevil has been found in 18 additional parishes in Louisiana as follows: Vernon, Sabine, Natchitoches, Grant, Winn, Caldwell, Ouachita, Moorehouse, Union, Lincoln, Jackson, Bienville, Claiborne, Webster, Bossier, De Soto, Red River, and Caddo. One wild host plant was taken in Louisiana during the last week of March. This leaves only 2 parishes in Louisiana unrecorded as infested, and I feel sure these have the weevil.
- Texas M. M. High (April 6): During the past three weeks this weevil has been found in Harrison County.

BANDED CUCUMBER BEETLE (Diabrotica balteata Lec.)

- Alabama K. L. Cockerham (April 6): Found very numerous on young corn in one field near Foley. As many as two or three beetles to a stalk were found and the corn showed considerable evidence of their feeding. (April 11): Noted attacking turnips and Irish potatoes. They were particularly numerous on turnips.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata Fab.)

- Alabama K. L. Cockerham (April 11): This insect was found attacking Irish potatoes and turnips at Foley, but it wasn't so abundant as D. balteata.
- J. M. Robinson (April 20): The spotted cucumber beetle is moderately abundant at Auburn.
- Mississippi C. Lyle and assistants (April): The spotted cucumber beetle is appearing in large numbers throughout practically all parts of the State, both adults and larvae doing considerable damage to gardens, particularly in the southern half of the State. (Abstract, J.A.H.)

Arkansas

D. Isely (April 23): The spotted cucumber beetle is moderately abundant in Washington County; very abundant in comparison with last year.

IMBRICATED SNOUT BEETLE (Epicaerus imbricatus Say)

Mississippi

H. Dietrich (April): The imbricated snout beetle has been found abundant on wax beans in several parts of George County during the month.

ASPARAGUS BEETLE (Crioceris asparagi L.)

California

A. E. Michelbacher (April 19): On the 24th of March the first asparagus beetles were observed near Rio Vista. They were fairly numerous and will probably do considerable damage to young asparagus allowed to go to fern if no attempts are made to control them with sprays. At the present time a few of the beetles can be found here and there throughout the Sacramento River delta. On good authority I am informed that the beetle was found as early as the 4th of March.

SEED CORN MAGGOT (Hylemyia cilicrura Rond.)

North Carolina

W. A. Thomas (April 4): A light infestation on snap beans has occurred in the Chadbourn area within the past week. The attack seems to be confined almost entirely to plants just emerging from the soil.

BEEF WEBWORM (Loxostege sticticalis L.)

North Dakota

J. A. Munro (April 22): Several reports have been received recently from McKenzie and Williams Counties that larvae and pupae are being observed in great abundance in fields being plowed at this time.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Florida

J. R. Watson (April 22): The bean leaf hopper, E. fabae, was extremely abundant in the Everglades section.

THREE-CORNERED ALFALFA HOPPER (Stictocephala festina Say)

Mississippi

H. Dietrich (April 21): The three-cornered alfalfa hopper was extremely abundant on wax beans in George County on April 4, but is now rare.

LEAF-FOOTED BUG (Leptoglossus phyllopus L.)

Mississippi

H. Gladney (April 18): Leaf-footed bugs are moderately abundant at Ocean Springs, Jackson County.

FALSE CHINCH BUG (Nysius ericae Schill.)

Utah G. F. Knowlton (April 4): The false chinch bug is active in northern Utah at the present time.

GREEN PEACH APHID (Myzus persicae Sulz.)

Mississippi J. P. Kislanko (April 20): Turnips and potatoes in Stone County are moderately infested.

New Mexico J. R. Eyer (April 20): Spinach aphids are appearing on potatoes, lettuce, and other garden vegetables.

FIELD CRICKET (Gryllus assimilis Fab.)

Mississippi C. Lyle and assistants (April): These insects were reported from Pearl River, Pike, and Lincoln Counties, where they were doing considerable damage to strawberries. (Abstract, J.A.H.)

THRIPS (Thysanoptera)

Oklahoma P. D. Sanders (April 22): Three acres of cucumbers growing under glass in Oklahoma City were being severely damaged by thrips. Reported to me by E. F. Burk.

MILLIPEDES (Myriapoda)

Mississippi C. Lyle (April 22): Severe injury to both green and ripe strawberries by millipedes (tentatively identified by E. W. Stafford as Julus sp. or Parajulus sp.) was reported from Durant, Holmes County, on April 10. Injury to lima bean seed was reported from Durant on the same date, and from Charleston, Tallahatchie County, on April 12.

California A. E. Michelbacher (April 19): The garden centipede (Scutigera immaculata Newp.) damage at Clarksburg appears to be somewhat less this year than last. However, in the delta region there are areas where it is doing a considerable amount of damage to asparagus, onions, and sugar beets.

SOWBUGS (Oniscidae)

Kansas H. R. Bryson (April 22): Two reports from Wichita, April 11, state that sowbugs were causing damage in that vicinity. One instance reports this pest injuring strawberry plants.

POTATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

North Carolina W. A. Thomas (April 8): Adults seem to be unusually abundant on young potatoes. To date no oviposition has been observed.

- Florida J. R. Watson (April 23): The Colorado potato beetle is moderately abundant in the potato area about Hastings.
- Missouri L. Haseman (April 25): Beetles were observed on potatoes on April 22.
- Alabama and Mississippi K. L. Cockerham (April 13, 14): On April 13 an unusual number of egg clusters and newly hatched larvae were observed on Irish potatoes at Foley, Ala. On April 14 damage was noted in Biloxi, Miss. Some plants already have most of their leaves destroyed. I have not seen eggs and larvae so numerous for several years.
- Mississippi C. Lyle and assistants (April): Although this insect was reported from practically all parts of the State it was observed to be causing appreciable damage in only the south-eastern section. (Abstract, J.A.H.)

BEANS

MEXICAN BEAN BEETLE (Epilachna corrupta Muls.)

- Connecticut N. Turner (April 22): The Mexican bean beetle shows very low winter mortality in hibernation cages.
- Delaware L. A. Stearns (April 21): Overwintered adults first appeared in cages April 19.
- New York N. Y. State Coll. Agr., Weekly News Letter (April 18): Adults were noticed on some beans in Erie County the early part of the week before the storm.
- Alabama J. M. Robinson (April 20): The Mexican bean beetle is moderately abundant at Morris.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

- Mississippi C. Lyle and assistants (April): The bean leaf beetle put in its appearance during the third week in the month and by the end of the month was doing considerable damage to young beans. (Abstract, J.A.H.)

PEAS

PEA APHID (Illinoia pisi Zalt.)

- Kansas E. G. Kelly (April 22): Pea aphids observed on alfalfa at Kingman March 31, and in Barton and Stafford Counties April 2.

Mississippi

C. Lyle and assistants (April): This insect, which was temporarily retarded by the freezing weather during the first week in March, has since built up to destructive populations, particularly on English and Austrian peas. (Abstract, J.A.H.)

CABBAGE

IMPORTED CABBAGE WORM (Ascia rapae L.)

Florida

H. T. Fernald (April 21): Adults are extremely abundant near and in cabbage fields and depositing eggs on the cabbages, at Winter Gardens. I think I never saw so many at one time.

Missouri

L. Haseman (April 25): Butterflies on wing have been seen in central Missouri in considerable numbers since April 1.

SOUTHERN CABBAGE WORM (Ascia protodice B. & L.)

Mississippi

H. Gladney (April 18): The southern cabbage worm is moderately abundant on cabbage at Ocean Springs, Jackson County.

DIAMOND-BACK MOTH (Plutella maculipennis Curt.)

South Carolina

W. J. Reid, jr. (April 25): The diamond-back moth has continued to be a very serious pest of cabbage in the Charleston area. Breeding of the insect continued unchecked during the entire winter. The pest attacked the spring cabbage crop as soon as it was set in the field. At first the infestations of the spring crop were located near winter cruciferous plantings. At the present, approximately one-half of the spring cabbage crop has been harvested. The worms are now present in enormous numbers on the cabbage; all stages of the insect are present in the field. The worms have tunneled through as many as six leaves of the cabbage heads; 90 per cent of the cabbage plantings visited by the writer show an infestation. The damage is severe in 75 per cent of the plantings.

Utah

G. F. Knowlton (April 12): Unusually abundant on wild mustard plants in several parts of Tooele and Box Elder Counties.

HARLEQUIN BUG (Margantia histrionica Hahn)

Mississippi

C. Lyle and assistants (April): This insect was doing considerable damage to crucifers in several parts of the State during the latter half of the month. (Abstract, J.A.H.)

Alabama

J. M. Robinson (April 20): The harlequin bug is moderately abundant at Auburn.

North Carolina

W. A. Thomas (April 5): This insect is present in large numbers on seeding collards where serious injury is being done to the developing seed pods near Chadbourn.

Oklahoma C. F. Stiles (April 21): The harlequin bug is present in larger numbers than usual and is distributed fairly well over the eastern half of the State. Some of the truck growers are hand-picking the bugs.

Florida J. R. Watson (April 23): The harlequin bug is moderately abundant.

Kansas H. R. Bryson (April 12): Reports from Cherryvale indicate that the harlequin bug is abundant in that vicinity; reported laying eggs.

A WEEVIL (Tanymecus laceana Hbst.)

Oklahoma C. F. Stiles (April 21): A weevil (Tanymecus laceana) has been found feeding on cabbage in Wagoner County and there are as many as 50 on some of the plants, but I doubt if the damage will be very serious.

CUCUMBERS

STRIPED CUCUMBER BEETLE (Diabrotica vittata Fab.)

New York N. Y. State Coll. Agr., Weekly News Letter (April 25): A few striped cucumber beetles were found in Erie County.

North Carolina W. A. Thomas (March 21): This insect was observed at Chadbourn in large numbers feeding on the open blooms of the chokeberry. At this time no cucurbits had been planted. This early appearance of the striped cucumber beetle in such large numbers would seem to indicate that the winter mortality has been much below the normal for this section.

Pennsylvania J. N. Knull (April 25): Adults plentiful on the flowers of Amelanchier canadensis at Mont Alto.

SQUASH

SQUASH BUG (Anasa tristis DeG.)

Indiana J. J. Davis (April 4): We have had reports of abundance of squash bugs in hibernating quarters at Lafayette.

Utah G. F. Knowlton (April 15): Many inquiries have been received about the squash bug. This destructive species is becoming more widely distributed each year, and severe losses result.

ONION

BLACK ONION FLY (Tritoxa flexa Wied.)

California E. O. Essig (April): Larvae found February 4; adults reared in March and April. Larvae attacking chives in Santa Barbara County. Exact locality will be furnished later. First record of this insect in California. Adults reared by E. O. Essig and determined by F. R. Cole.

STRAWBERRY

STRAWBERRY WEEVIL (Anthonomus signatus Say)

Mississippi J. P. Kislanko (April 20): The strawberry weevil is doing some damage to the young berries, but more so to the native blackberries. They were first observed on March 28.

North Carolina W. A. Thomas (April 13): The strawberry weevil began emerging from hibernation the latter part of the third week of March. They were first observed working in strawberry fields on March 28. By April 10 the infestation had become general over the Chadbourn area and the injury had become more widespread than usual.

A STRAWBERRY ROOT WEEVIL (Dyslobus decoratus Lec.)

Washington M. J. Forsell and M. H. Hatch (April 18): Adults of this species were abundant (3 or 4 to a plant) on yearling strawberry plants, the leaves showing signs of extensive feeding on April 16, at Bainbridge Island. The field had a southern exposure, and the beetles were most abundant along the margin of the field nearest the second-growth timber. No larvae were found at the roots, though lots of grubs could be found in fields harboring Brachyrhinus ovatus L.

STRAWBERRY ROOT APHID (Aphis forbesi Weed)

Arkansas W. J. Baerg (March 30): The young lice have appeared in the crowns of strawberries at Fayetteville. Late last fall they were very numerous on strawberry plants.

SWEETPOTATO

SWEETPOTATO FLEA BEETLE (Chaetocnema confinis Crotch)

Alabama K. L. Cockerham (April 13): The sweetpotato flea beetle was found quite generally distributed over a sweetpotato field at Foley, on April 13, but at that time very little feeding was noticeable.

BEETS

BEET LEAFHOPPER (Eutettix tenellus Bak.)

- Idaho C. Wakefield (April 19): Beet leafhoppers are very scarce in breeding areas.
- Utah G. F. Knowlton (April 1): Dark overwintered females were found to be moderately abundant on young Cheirinia reparda in places in the Flux, Grantsville, and upper Skull Valley areas of Tooele County. (April 18): Beet leafhoppers are moderately abundant in some Tooele and Box Elder County breeding grounds.
- New Mexico J. R. Eyer (April 20): Beet leafhoppers are moderately abundant. First-generation nymphs appeared early in March. Adults are abundant on Lepidium alyssoides and full plantings of beets.

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula Fab.)

- Florida F. S. Chamberlin (April 8): Tobacco flea beetles are becoming unusually abundant on newly set tobacco in Gadsden County.
- North Carolina Z. P. Metcalf (April): Has very seriously damaged old tobacco beds in all parts of the State.
- Tennessee S. Marcovitch (April 25): Reports indicate that flea beetles are doing considerable damage to tobacco beds this spring.

F O R E S T A N D S H A D E - T R E E I N S E C T S

GYPSY MOTH (Porthetria dispar L.)

- Vermont H. L. Bailey (April): Infestations occur in the towns along the Connecticut River from Springfield southward. Scouts of the Vermont Department of Agriculture found a decrease in number of egg masses about colonies which were scouted last year, but more general infestations than previously in woodlands. A few egg masses have been found in Newbury and Fairlee where small colonies have persisted several years.
- Rhode Island A. E. Stene (April 22): Egg clusters are more abundant than they have been for several seasons and specimen clusters

brought into the office from different places in northern sections of Rhode Island are hatching well - not less than 60 or 70 per cent. If conditions are favorable for young caterpillars we are likely to have heavy infestations in a few places.

New York
and
New Jersey

News Letter, Plant Quarantine and Control Administration No. 16 (April 1): The largest infestation of the gypsy moth found on Long Island, N. Y. this fiscal year is situated near Glen Cove and consists of 307 new egg clusters. The next largest colony in size is one of 141 new egg clusters located near Roslyn, N. Y. The last-known infestation in New Jersey was found and eradicated in a small area in Piscataway Township which borders partly on the eastern limits of Bridgewater Township. There has not been any scouting work in that section of Bridgewater Township, which is now being examined, since the fiscal year 1930.

FALL CANKER WORM (Alsophila pometaria Harr.)

New York

E. P. Felt (April 22): The fall canker worm is locally abundant in various Long Island localities.

California

F. H. Wymore (March 29): The fall canker worm is moderately abundant in many prune orchards in Napa, Solano, Sonoma, and Yolo Counties.

SPRING CANKER WORM (Paleacrita vernata Peck)

North Dakota

J. A. Munro (April 22): Adults of the spring cankerworm were first observed this season on April 14. They did not appear so abundant as was the case last year.

RESPLENDENT SHIELD BEARER (Coptodisca splendoriferella Clem.)

New York

E. P. Felt (April 22): The resplendent shield bearer cocoons are numerous in woodland areas bordering New York City.

EUROPEAN FRUIT LECANIUM (Lecanium corni Bouche)

Vermont

H. L. Bailey (April): Some activity among the great numbers of the crawlers on the bark of elm and ash trees was noted at Montpelier on a very warm day in early April. Most of them were still inactive April 25. Heavy infestations have been reported at St. Johnsbury and Lyndonville also.

ASH

CARPENTER WORM (Prionoxystus robiniae Peck)

Nebraska

M. H. Swenk (March 20 to April 20): During April reports of activity of the carpenter worm on ash trees were received from northeastern Nebraska.

BANDED ASH BORER (Neoclytus caprea Say)

Nebraska M. H. Swenk (March 20 to April 20): During April reports of activity of the banded ash borer on ash trees were received from northeastern Nebraska.

ASH LEAF BUG (Neoborus illitus Vand.)

California E. O. Essig (April 23): Ash bug was very abundant on Oregon ash at Walnut Creek on April 10, defoliating a few trees.

BEECH

A SCALE INSECT (Phenacoccus serratus Ferris)

Connecticut R. B. Friend (April 22): Ovisacs quite common on the lower part of the trunks and under side of lower branches of beech trees in Edgewood Park. Not sufficiently abundant to injure the host.

ELM

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

Wyoming A. G. Stephens (April 18): The European elm scale is found in the central part of the State, mostly on shade trees and ornamentals.

Colorado G. M. List (April 20): A new low temperature for March occurred early in the month, following several warm days the latter part of February, that resulted in probably 95 to 98 per cent mortality of the European elm scale in northern Colorado.

ELM SCURFY SCALE (Chionaspis americana Johns.)

Missouri L. Haseman (April 25): Elm scurfy scale was found actually killing large maple trees in the village of Salisbury. For the past three years this scale has been killing elm trees in this village.

JUNIPER

JUNIPER WEBWORM (Dichomeris marginellus Fab.)

Connecticut M. P. Zappe (April 25): Larvae are very abundant this year and causing much injury at New Haven, Hamden, and New London. They usually are not very abundant. Several Juniperus hibernica and J. meyeri are badly webbed and partially defoliated. A large block of J. meyeri in New London is heavily infested now. The same block showed no injury in July, 1931.

OAK

OAK GALL INSECTS (Andricus spp.)

Mississippi D. W. Grimes (April 20): A. punctatus Bass. was abundant on oak, March 17, at Madden.

Alabama J. M. Robinson (April 20): An oak gall insect was reported on water oak leaves at Montgomery. A. coronus Beut. is very abundant at Anniston.

AN OAK KERMES (Kermes pubescens Bogue)

New York E. P. Felt (April 22): This oak gall scale insect is abundant on oak in the vicinity of New York City.

GOLDEN OAK SCALE (Asterolecanium variolosum Ratz.)

Pennsylvania J. N. Knull (April 11): Six chestnut oak trees, from 4 to 8 feet tall, are infested with the golden oak scale. Infestation is very heavy and many small branchlets have been killed.

PINE

A PINE SHOOT MOTH (Rhyacionia rigidana Fern.)

Connecticut R. B. Friend (April 22): Pupae were frequently found in the dead buds of red pine during the winter, but the insect has not been found sufficiently abundant to cause serious injury.

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

Vermont H. L. Bailey (April): Inspections made by the Vermont Department of Agriculture in many plantations of red and Scotch pine failed to reveal any evidence of the presence of the insect.

A PINE WEEVIL (Pissodes approximatus Hopk.)

Pennsylvania J. N. Knull (April 21): The first adults were observed on white pine lumber on April 21 at Mont Alto.

INTRODUCED PINE SAWFLY (Diprion simile Htg.)

Pennsylvania E. P. Felt (April 22): The imported pine sawfly was found by Mr. Ernest Robertson occurring abundantly on white pine in the Philadelphia area.

BARK BEETLES (Scolytidae)

Pennsylvania J. N. Knull (April 21): The first adults of the following bark beetles were observed at Mont Alto on April 21: Hylastes porculus Er., Hylurgops pinifex Fitch, Dendroctonus valens Lec., Pityogenes hopkinsi Sw., Ips pini Say, and I. grandicollis Eich.

Florida E. W. Berger and G. B. Merrill (April 24): The engraver beetle (I. calligraphus Germ.) probably occurs generally over all parts of the State wherever pine trees have been weakened by drought. Many pine trees are being killed.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Vermont H. L. Bailey (April): The pine leaf scale is very abundant on ornamental pines at Charlotte.

Wisconsin E. L. Chambers (March 28): The pine leaf scale, favored by long season, mild winter, and apparent scarcity of natural parasites, is becoming established in various sections of the state heretofore free from it. Many ornamental plantings are being attacked by it in several localities in southern Wisconsin.

PINE BARK APHID (Chermes pinicorticis Fitch)

New England and New York E. P. Felt (April 22): The woolly pine aphid is somewhat abundant in the environs of New York City and also in southwestern New England.

Michigan E. I. McDaniel (April 28): This insect is very abundant on pine at Wakefield.

SPRUCE

SPRUCE GALL APHID (Chermes abietis L.)

Connecticut E. P. Felt (April 22): The spruce bud gall is locally abundant in the Stamford area, the young being numerous upon trees showing many old galls.

SYCAMORE

SYCAMORE LACEBUG (Corythucha ciliata Say)

Connecticut W. E. Britton (April 22): Present by the thousands hibernating under loose bark of a large sycamore tree at Old Lyme. This insect was very common generally last year.

INSECTS AFFECTING GREENHOUSE
AND ORNAMENTAL PLANTS

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

Georgia
and
Florida

J. B. Gill (April 25): Complaints on account of infestation of shrubbery continue to come in from various localities. Within the past month we have supplied Vedalia adults, pupae, and larvae for infestations at Albany, Hawkinsville, Vienna, Leesburg, Claxton, Waycross, Valdosta, Mabila, and Adel, all in Georgia, and at Jacksonville, Florida.

Alabama

J. M. Robinson (April 20): The cottony-cushion scale is reported on roses, boxwood, and other shrubs at Dothan.

THRIPS (Heliothrips haemorrhoidalis Bouche)

Utah

G. F. Knowlton (April 5): Thrips are damaging poorly cared for greenhouses in several places.

BULB MITE (Rhizoglyphus hyacinthi Bdv.)

Michigan

E. I. McDaniel (April 28): Severe losses to Easter lilies in greenhouses have been reported from Detroit.

SOWBUGS (Oniscidae)

Indiana

J. J. Davis (April 26): Sowbugs were reported very abundant in greenhouses at Brazil and New Albany in February. At the latter place they were attacking petunias as they sprouted and other potted plants.

ALDER

A LEAF BEETLE (Lina interrupta Fab.)

Mississippi

H. Dietrich (April 21): This beetle had again defoliated the alders along White's Creek, George County, by the first of the month.

ARBORVITAE

ARBORVITAE APHID (Dilachnus thujaefolinus Del G.)

Mississippi

G. I. Worthington (April 20): Arborvitae aphids are general on arborvitae. The aphids are being attended by flies and wasps.

Texas

O. G. Babcock (March 1 to 16): The several species of arborvitae are found to be quite severely infested with this plant louse. The lice are to be found mainly on the small branches enclosed by the foliage and also out near the tips or smaller branches about the many apexes of the tree. Large and small trees are affected alike. *Syrphus* flies and lady beetles were observed to be feeding upon these lice.

EUONYMUS

EUONYMUS SCALE (*Chionaspis euonymi* Comst.)

New England
and
New York

E. P. Felt (April 22): The euonymus scale is breeding abundantly on individual plants or groups of plants in the Boston, Mass., area, in southwestern New England, and in southeastern New York.

GLADIOLI

GLADIOLUS THRIPS (*Taeniothrips gladioli* Moulton)*

Florida

J. R. Watson (April 22): We now have this thrips in Stuart, Sanford, Palmetto, Ellenton, Winter Haven, and Dundee. The infestations at Stuart, Ellenton, and Sanford were severe.

Michigan

E. I. McDaniel (April 16): A very severe infestation of the gladiolus thrips was found on the corms grown on the Botany Experiment Farm at the Station, East Lansing. All corms were apparently free from disease and insects last fall when stored. Those in trays near the top of the room were most severely infested. Other places in Michigan where this insect has been recorded are Owosso, Flint, and around Port Huron.

HACKBERRY

HACKBERRY BUD GALL (*Pachypsylla gemma* Riley)

New England
and
New York

E. P. Felt (April 22): The hackberry bud gall is locally abundant on its food plant in southwestern New England and southeastern New York.

BARNACLE SCALE (*Aspidiotus cirripesiformis* Comst.)

Georgia

J. B. Gill (April 25): Shade trees, especially the hackberry, and some ornamentals in the vicinity of Albany have been found to be heavily infested.

*F. F. Smith (April): Specimens received from P. T. Ulman, Ft. Wayne, Ind., in April and from C. A. Horsefeld, Baltimore, Md., in February have been identified by H. Morrison as *Taeniothrips gladioli* Moulton.

HOLLY

HOLLY LEAF MINER (Phytomyza ilicis Curt.)

New York

E. P. Felt (April 22): The holly leaf miner was reported by Mr. G. C. Pike as causing considerable foliage injury at Lawrence, Long Island, N. Y.

MAGNOLIA

TULIP TREE SCALE (Toumeyella liriodendri Gmel.)

Indiana

J. J. Davis (April 26): Magnolia scale (T. liriodendri) was reported abundant on Magnolia at Pekin in January. The reporter advised that it had been very abundant for the past two years.

OLEANDER

OLEANDER SCALE (Aspidiotus hederac Vall.)

Nebraska

M. H. Swenk (March 20 to April 20): Reports of infestations of oleanders by the oleander scale were received during April.

ROSE

ROSE APHID (Macrosiphum rosae L.)

Texas

P. D. Sanders (April 14): A man brought specimens of these insects into the Plant Quarantine and Control Administration office for determination. Very injurious in El Paso.

I N S E C T S A T T A C K I N G M A N A N D

D O M E S T I C A N I M A L S

MAN

MOSQUITOES (Culicinae)

Connecticut

M. Turner and R. C. Botsford (April 22): The first larvae of Aedes cantator Coq. of the season were found along the shore and were about half-grown.

South Carolina

W. E. Dove, D. G. Hall, and F. M. Prince (April 14): Salt-marsh mosquitoes (A. sollicitans Walk.) have become extremely abundant in the low coastal areas.

D. G. Hall (April 21): Culex quinquefasciatus Say is uncommonly abundant in houses at Charleston this spring.

Missouri

L. Haseman (April 25): Various species of mosquitoes (Culex spp. and Anopheles spp.) were beginning to move from hibernation and attacking people ^{at} Columbia the early part of April.

Mississippi

H. Dietrich (April 21): Mosquitoes, mostly the salt-marsh species, and a punkie, probably Culicoides canithorax Hoffm., were very abundant on the coast near Ocean Springs on March 27.

TROPICAL RAT MITE (Liponyssus bacoti Hirst)

Virginia

G. T. French (March 29): This case was referred to us by the City Health Department of Richmond and occurs on the ground floor, which is a semibasement, in the down-town section of Richmond, and in the same block with a rather large market. The upper stories of the building are used as a hotel. The rooms that are infested are occupied by real estate people who report that the mites are very annoying to them because of the irritation that results from the bites. A second report has come to us recently from the same block, and this material was forwarded by a barber. This mite has not been reported to us previously and we have had no other experience with it. The mites are capable of covering considerable ground and are crawling around pretty generally on the wooden wainscoting as well as on the floor. One rat was injured in some way not long ago in these rooms and the people told us it was literally covered with these mites. So there is no doubt apparently that the rats which are overrunning the building are carrying the mites.

DEER FLIES (Chrysops spp.)

South Carolina

D. G. Hall and F. M. Prince (April 26): Early spring species of deerflies are very annoying to man and animals on or near drainage ditches in the coastal areas.

CATTLE

HORN FLY (Haematobia irritans L.)

Missouri

L. Haseman (April 25): Horn flies were beginning to annoy cattle somewhat by April 15 though they were not very abundant.

STABLE FLY (Stomoxys calcitrans L.)

Missouri

L. Haseman (April 25): Stable flies were appearing in small numbers April 20.

Kansas

E. G. Kelly (April 22): Stable flies were observed laying eggs and annoying cattle at Kingman March 31. Many larvae and puparia found at Great Bend.

SHORT-NOSED CATTLE LOUSE (Haematopinus eurysternus Nitz.)

Nebraska

M. H. Swenk (March 20 to April 20): A Nuckolls County correspondent reported an infestation of his cattle with the short-nosed cattle louse in early April.

AN OX WARBLE (Hypoderma sp.)

Kansas

E. G. Kelly (April 22): Adults were out in Greenwood County March 31. Saw herds running in Sedgwick and Kingman Counties. Have found no grubs since March 1.

HORSE

BUFFALO GNATS (Simuliidae)

Mississippi

F. A. Smith (April 20): Buffalo gnats were very abundant the first of the month in Tate, Panola, DeSoto, Tunica, and Quitman Counties.

POULTRY

CHICKEN MITE (Dermanyssus gallinae L.)

Mississippi

F. A. Smith (April 20): The common chicken mite is abundant in Tate and Quitman Counties.

H O U S E H O L D A N D S T O R E D - P R O D U C T S

I N S E C T S

TERMITES (Reticulitermes spp.)

General

T. E. Snyder (March): During the month of March 159 cases of termites were reported to the Bureau of Entomology. The following list gives the number of cases reported from each Section. New England, 2; Middle Atlantic, 65; South Atlantic, 38; East Central, 18; West Central, 4; Lower Mississippi, 15; Southwest, 12; Pacific Coast, 5.

Connecticut

M. P. Zappe (April 21): We have received reports of injury by termites from Manchester, Branford, New Haven, and Union. They have apparently been present for some years. One modern and very expensive home attacked and the timbers in the collar are badly eaten. This is the fifth case of injury reported in the last six months, previous complaints having been rather rare.

- South Carolina W. E. Dove, D. G. Hall, and F. M. Prince, (April 28): Numerous requests for information on termite control have come to hand during the past few weeks.
- Illinois J. H. Bigger (March 26): Two outbreaks in Canton were seen, while reports are that numerous houses have been damaged. One outbreak in Jacksonville was investigated. All are properties built in the last fifteen years. Two were apparently well-built brick and concrete buildings.
- Kansas E. G. Kelly (April 22): Stakes were destroyed in alfalfa fields in Greenwood County since last summer.
- California R. Bogue (April 22): There is a heavy infestation of R. hesperus Bks., at El Monte.

ARGENTINE ANT (Iridomyrmex humilis Mayr)

- Alabama J. M. Robinson (April 20): The Argentine ant is reported from Wetumpka and Auburn.

BEETLES (Anobiidae)

- Rhode Island and Louisiana A. G. Boving (April): The following comment was made on a determination by Dr. Boving of specimens received from Dr. A. E. Stone, Kingston, which were identified as Xestobium sp. This insect injured books in a record vault of the Superior Court, Providence, R. I. Another large anobiid larva (Nicobium hirtum Ill.) is known as damaging library books in Louisiana.

PEA WEEVIL (Bruchus pisorum L.)

- Michigan R. E. Pettit (April 28): We have been receiving specimens of the pea weevil recently, mostly from small gardeners in seed held over for planting. This insect has not been of economic importance in Michigan for a number of years.
- Idaho C. Watseland (April 19): The pea weevil was beginning to fly April 10, or possibly a few days earlier in the vicinity of Moscow.

SOUTHERN COWPEA WEEVIL (Callosobruchus maculatus Fab.)

- Mississippi H. Dietrich (April 21): The southern cowpea weevil is extremely abundant in cowpea seed improperly stored in George and Perry Counties.

INSECT CONDITIONS IN PORTO RICO DURING FEBRUARY AND MARCH, 1932*

M. D. Leonard

Insular Experiment Station, Rio Piedras, Porto Rico.

The sugarcane scale (Aspidiotus sacchari Ckll.) was moderately common on a large lot of Uba cane being loaded at the dock on Vieques Island, on March 23.

A sugarcane mealybug, Pseudococcus sacchari Ckll., was found moderately common on both Uba and Crystalina cane in several sections examined on Vieques Island on an inspection trip on March 23.

A mealybug, Pseudococcus boninsis Kuwana (calceolariae of authors), was not uncommon on sugarcane in several localities on Vieques Island examined in company with C. E. Pemberton on March 23.

Larvae of a curculionid beetle, Lechriops psidii Marshall (Buchanan & Böving det.) found in mummied guavas in Bayamon on January 11. (C. G. Anderson.) The type is from Porto Rico and was described from specimens causing mummied guavas; this is the second record from the Island.

The melon aphid (Aphis gossypii Glov.) was heavily infesting the tender twigs and leaves of many young grapefruit trees at Anasco on January 27 (A. G. Harley). Apparently this is the first record of injury or even occurrence on citrus in Porto Rico. It was also heavily infesting a 2-acre planting of cassaba melons at Loiza on January 8.

White grubs, Phyllophaga spp., were reported on April 13 as having severely injured a number of pineapple fields at Vega Baja and Corozal during November and December, 1931. (E. Rivera)

The grapevine aphid, Aphis illinoisensis Shimer, was present in small numbers on several vines in the arbor of the Hotel Melia's patio at Ponce early in March.

A bean lacebug, Corythucha gossypii Fab. (H. G. Barber det.) was heavily infesting the foliage of 20 papaya trees at the Substation at Isabela on March 8. (C. G. Anderson.)

*Correction: Typographical errors led to the publication of Empoasca fabanae and E. Jabanæ in Porto Rico in the Insect Pest Survey Bulletin during 1931. There are no such species. All these records refer to E. fabalis DeLong.

A lima bean pod-borer, Maruca testulalis Geyer, was found in 1 per cent of the lima bean pods at Rio Piedras, on January 15 (A. S. Mills). Also one larva in cull pigeon peas at Arecibo on February 2 and another larva on February 4 in lima bean pods (C. S. Anderson and A. S. Mills). On February 29, 5 per cent of 100 cull lima bean pods were found infested at Arecibo and on March 1, 3 larvae found in a hamper of string bean pods from Isabela (C. S. Anderson). Three larvae of a braconid parasite, Microbracon thurberiphages Mues. (C. F. W. Muesebeck det.) were found infesting one out of 20 larvae of M. testulalis in the pods of lima beans at Cidra on February 2 (A. S. Mills.) This is the first record from Porto Rico.

Larvae of a bean pod-borer, Fundella cistipennis Dyar (C. Heinrich det.), were found lightly infesting a 2-acre lima bean field at Loiza on January 4. (A. S. Mills.)

A noctuid, Phytometra oo Cram. (W. Schaus det.), was lightly infesting a small garden patch of lima beans at Rio Piedras on January 15.

The fall armyworm, Laphygma frugiperda A. & S., was lightly infesting the pods in a 1-acre patch of lima beans at the Substation at Isabela on January 12. (C. G. Anderson)

Larvae of the tobacco budworm (Heliothis virescens Fab.) were found eating into pigeon-pea pods in a small package from Aguas Buenas on January 21 (A. S. Mills; C. Heinrich det.); also 5 larvae were found infesting pigeon-pea pods in a hamper from San Sebastian examined on January 26. (A. G. Harley.)

Larvae of a eulophid, Grotiusomyia nigricans How. (C. F. W. Muesebeck det.) were found feeding on Lamprosoma indicata Fab. larvae on lima beans at Rio Piedras on January 15. (C. G. Anderson.) Apparently it has not before been recorded from Porto Rico.

A bean leaf-beetle, Cerotoma ruficornis Oliv., (H. S. Barber det.) was observed moderately infesting a 2-acre field of lima beans at Loiza on January 18 and lightly infesting a 1-acre field at Rio Piedras on January 1. (A. S. Mills.)

A leaf beetle, Diabrotica graminea Baly, was reported on February 2 as doing considerable damage to both snap beans and Irish potatoes at Orocovis.

Cutworms (Noctuidae) had destroyed about 5 per cent of one-month-old Irish potato plants on one-half acre at Aibonito by February 3, although many of the injured plants were sending up new shoots; Severo Pagan, Agr. Agt. at Aibonito, reported that 4 or 5 plantings in the vicinity were similarly affected. (F. Chardon.) Mr. J. E. Rayner reported on February 15 that cutworms had been at that time working for about 3 weeks on 10 acres of his pineapples at Arecibo, causing a loss of about 1.3^{per cent} of the plants by eating out large holes and destroying any market value of these plants.

An eggplant lacbug, Corythiaca planaris Uhler (H. G. Barber det.), was moderately infesting the leaves of 10 out of 40 eggplants inspected at Juncos January 25. (R. Faxon.)

Five moths of the pyralid Argyria opposita Zeller (W. Schaus det.) were collected on eggplant leaves at Juncos January 25. (R. Faxon.)

The green peach aphid (Myzus persicae Sulz.) was found to be lightly infesting the leaves of a 5-acre pepper field at Loiza on February 8, 1932. (R. Faxon.)

The melon worm (Diaphania hyalinata L.) was feeding on pumpkin leaves at Juncos on January 25. (R. Faxon.)

The cotton leaf worm (Alabama argillacea Hubn.), though present during February and March, was almost a negligible factor on the south coast crop. (C. C. Morrow.)

The pink boll worm (Pectinophora gossypiella Saund.) has been scarce on the south coast cotton crop during February and March. (C. C. Morrow.)

A pit-making scale, Asterolecanium pustulans Chll., was observed badly infesting mango trees at Rio Piedras on February 23. (F. Sein.) This species was also very abundant on a number of oleanders at Guanica on March 12.

A water lily aphid, Pentalonia nigronervosa Coq., (F. Sein det.) was reported by Dr. N. L. Britton as infesting several water lily plants at Santa German on December 29, 1931, and in March, 1932. In February several plants were killed at Santurce, the leaves being badly infested and curled. (F. Sein.)

The red-banded thrips (Heliothrips rubrocinctus Giard) defoliated several trees of the Cashew nut or pajuil, in September, 1931, and on February 23, 1932, at Rio Piedras. (F. Sein.)

On February 26 a casuarina hedge at the Colegio Puertorriqueno was found lightly infested by the cottony-cushion scale (Icerya purchasi Mask.); some "gallego" plants, Polyscias guilfoylei, were also somewhat infested. (F. Sein.)

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